NYSDEC Comments
Calverton – NWIRP Site #153136
Draft Phase 2 RCRA Facility Investigation Report (Sites 1, 2, and 7)

The Department has reviewed the Draft Phase 2 RCRA Facility Investigation report for the Calverton facility, dated January 1998, we have the following comments.

1. **Comment:** Page 1-5 Facility History. A brief description of the recently completed transfer of the facility to the Town of Riverhead needs to be included in this section

   Response: Agree The property transfer had not yet occurred at the time that the report was prepared

Site 1 – Northeast Pond Disposal Area

2. **Comment:** Page 2-27 The report indicates that the finding of thallium in groundwater samples may be naturally occurring and not a site contaminant Note that thallium bromide and thallium iodide are used for infrared radiation transmitters in military detection devices. Due to the toxic nature of thallium it is advisable to do further records search to determine if this element was used at Calverton and to clarify if it is indeed a site contaminant.

   Response: The Navy will interview Northrop Grumman employees to determine if thallium based detectors may have been used and the facility and then disposed of in the Northeast Pond area.

   However, based on the evaluation of the analytical results, the probability that thallium is site related is low Two round of groundwater testing were conducted during each of two phases of investigation, for total for a total of four rounds. For the first two rounds, samples were collected using a bailer and sample results may be biased high because of fill intrusion into the wells. The second phase samples were collected using low flow sample techniques. As a result, the Phase 2 results are considered more representative of site groundwater.

   Thallium was detected in the upgradient monitoring well (NP-MW01) in two of the four rounds at concentrations of 4 0 and 4.1 ug/l, (MCL is 2.0 ug/l). Thallium was detected in more than half of the downgradient monitoring well samples, but at concentrations ranging from 3 3 to 6.7 ug/l. In addition, thallium was detected in 6 of 13 laboratory and field QA/QC data at concentrations ranging from 2.9 to 4.0 ug/l. Thallium was also detected in one QA/QC sample collected in August 1994 at a concentration of 12.4 ug/l. However this single data point was a duplicate of a sample with a non detected result. The poor comparison between original and duplicate result raises a concern about the accuracy of the result. In addition, the 1994 sample results may be biased high because of fill intrusion into the well.

   The relative consistency between the upgradient and downgradient data and the finding of similar concentrations of thallium in blank samples is a general (although not conclusive) indication that the presence of thallium in the groundwater is not site related. In addition, thallium was not detected in the soil

or waste samples from the site However, long term monitoring may be required finally resolve whether or not thallium is a site related contaminant.

3. **Comment:** Page 2-32 Table 2-3 indicates that semi-volatile tentatively identified compounds (SVOC TICS) were detected The values of the detections should be included in Table 2-3, a finding of a significant level of SVOC TICS may require additional sampling or a further review of lab results to determine the compounds present

   Response: TIC results are presented in Appendix A of Volume II. TIC results are not presented in Table 2-3 because there is a low confidence as to the actual chemical identity. In addition, TIC concentration values are not presented in the table because the reported laboratory results are considered inaccurate and actual results can vary by one or more orders of magnitude

4. **Comment:** Page 2-58 Conclusions pertaining to the NE Pond Disposal area appear to be contradictions. Item 5 indicates that the results of the benthic macrovertebrate investigation indicate a normally functioning ecological community in the pond Item 6 indicates that eroding contaminated fill material and sediments adjacent to the fill are continuing to impact ecological receptors in the pond. Further clarification is required.

   Response: Conclusion Number 6 will be revised as follows. " . thereby **may** impact ecological receptors "

Site 2 – Fire Training Area

5. **Comment:** Page 3-1 A statement needs to be added to this section indicating that this area is listed in the NYSDEC's Registry of Inactive Waste Disposal Sites as a Classification 2.

   Response: Agree

6. **Comment:** Page 3-16 The statement on this page that the results of Geoprobe sampling dictate that ". the extent of groundwater contamination is defined and does not extend off site" is questioned.

   The report indicates that two methods of groundwater sampling were used. The appendices with sampling logs do not indicate the amount of water purged from the temporary wells prior to sampling. It is possible that not enough water was purged from the boring to pull in representative formation water If water was used during drilling it is possible that the groundwater adjacent to the bore hold was diluted and not yield a true sample reflecting actual conditions.

   Response: Water was only added as necessary during drilling to control running sands. For the wells in which a geoprobe was used, water was not added and a minimum of three well volumes of water were removed from the well prior to sampling.

For deeper wells, where hollow stem augers were used, if water was added, an equivalent volume of water, plus three well volumes were removed prior to sampling. The data is available in the field log books, (although in a rough form) If there are specific wells which concern the state, we can extract the information.

7. **Comment:** Temporary well FT-TW-03 revealed VOC contamination at a depth of 70 feet below the water table (1,1 DCA (31 ppb), yet the temporary monitoring wells installed outside the fence line are only drilled to a depth of 40 feet below the water table It would appear that the wells installed outside the fence are not deep enough to confirm to deny the presence of VOC's at greater depths. This indicates the need to install vertical profile wells in this area.

   Response: The Navy disagrees. Monitoring well FT-TW02, which is hydraulically downgradient of FT-TW03, was installed to a depth of 60 and 80 feet below the water table Contamination was not detected at this location at depth, indicating that contamination from FR-TW03-70 has not yet reached the fence.

8. **Comment:** Figure 3-1 The individual compound and associated laboratory value should be listed on the Figure

   Response: The individual compounds and values are presented in Table 3-1. Figure 3-1 is presented as an overview of the data.

9. **Comment:** Table 3-1 Values should be labeled as being reported in parts per billion

   Response: The units of ug/l will be added to the table.

Site 7- Fuel Depot Area

10. **Comment:** Figure 4-1 There is an inconsistency in presenting data on the various Figures in the report. Values of contaminants found in groundwater samples in this figure are reported down to 1 ppb, while in Figure 4-2 values are reported only if they exceeded MCL's. Individual compounds and their associated values should be listed in Figure 4-1.

    Response: Data presentation is based a compromise between simple understandable summaries and rigid technical detail. Figures such as Figure 4-1 allow general trends to be observed and allow factors such as retardation factors and biodegradation rates to be simplified. As a result, all positive detections are presented and are grouped by chemical class (chlorinated VOCs or fuels). However, chemical specific details are presented in tables to allow a check of the data points.

    Other figures such as permanent monitoring wells data are present data exceeding a criterial (MCLs) because the initial analyte list consists of several hundred chemicals. Most of these chemicals are not detected, however many

wells contain metal data which does not indicate contamination but would clutter up the map.

As a result, the maps and details presented are a compromise. Numerous alternative maps are available

11. **Comment:** Figure 4-2 It would appear by the groundwater sampling results and construction details that FD-MW-07 possibly was not installed deep enough to intersect the plume The underground storage tanks in this area were placed between 15 to 20 feet below the surface (page 4-20) but the total depth of FD-MQ-07 was 21 feet, approximately 200+ feet down gradient of the tank area. This well appears to possibly be intersecting the upper fringe of down gradient contamination and may be indicated by the findings of 4.2 ppb of TCE and 2ppb of 1,1,1 TCA, in FD-MW-07

Response: The Navy disagrees. The depth of FD-MW07 was selected based on the following factors

- Fuel type chemicals were detected in temporary well FDTW04 at depths of 3 to 5 and 18 to 20 feet below the water table, but not at a depth of 40 feet below the water table. The finding of toluene in this well provide evidence of a connection between contaminated site groundwater and this well.

- Contamination at FDTW03 found the same chemicals at the same depths, but at much higher concentrations (a factor of 40 times higher). Also, the shallow groundwater sample at FDTW03 (3 to 5 feet BWT) is more contaminated than the deeper sample, indicating the contamination from the site is not sinking quickly. Also, the finding of the chemicals in both depths indicates that the contaminated groundwater is at least 15 feet thick.

- Based on measured vertical and horizontal gradients and estimated conductivites, the vertical component to groundwater flow is less than 10%, meaning that over a horizontal run of 200 feet, the maximum vertical drop would be 20 feet. This esimate is consistent with finding contamination in the 3 to 5 foot interval and the 18 to 20 foot interval, but not in the 38 to 40 foot interval.

Please note however, that as part of a remedy, additional monitoring wells in this area may be considered.

12, **Comment:** In general, the report would be enhanced if cross sectional view of each area were added, this would give a better overall picture as to the total extent of the contamination.

The aforementioned comments reflect the Departments major concerns regarding this report, additional comments, may be raised during future TRC and/or RAB meetings If you have any questions, please call me at (518) 457-3976.

Response: As discussed during the previous RAB, the Navy is working on enhanced graphics which can be used to enhance understanding.